

CHAPTER 29

PUBLIC WORKS DEPARTMENT

STANDARD OPERATING PROCEDURES

500 BED FLEET HOSPITAL

## TABLE OF CONTENTS

TOPIC	<u>PAGES</u>
A. MISSION	1
B. FUNCTIONS	1
C. PHYSICAL DESCRIPTION	2
D. SPECIAL CONSIDERATIONS	5
E. WORKLOAD	5
F. ORGANIZATION	6
1. RESPONSIBILITY	6
2. ORGANIZATION CHART	6
3. STAFFING	7
4. ASSIGNMENTS BY BILLET SEQUENCE CODE	7
5. WATCH BILL	7
6. SPECIAL WATCH	8
G. TASKS	8
H. STANDARD OPERATING PROCEDURES	15
I. CLINICAL POLICIES/GUIDELINES	15
J. STANDARDS AND JOB DESCRIPTIONS	15
K. DOCUMENTATION	
1. REFERENCES	15
2. FORMS	18

**500 BED FLEET HOSPITAL**  
**STANDARD OPERATIONS PROCEDURES**  
**PUBLIC WORKS DEPARTMENT**

The standards and procedures outlined below are by no means inclusive or a substitute for directives, instructions, and manuals. The Public Works Officer is responsible for insuring that PWD staff and subordinate personnel are aware of these standards and procedures and that they are implemented.

A. **MISSION:** The Public Works Department (PWD) is responsible for the administration and management of:

1. All public works and engineering services,
2. Operations and/or maintenance of facilities, utilities, and non-medical properties.
3. Operations and maintenance of transportation, construction, and material/weight handling equipment.
4. Fire prevention and control.
5. Air operations.
6. Refuse, sewage, and hazardous waste collection and disposal.

B. **FUNCTIONS:**

1. Camp maintenance.
  - (a) Engineering (planning and estimating).
  - (b) Work control.
  - (c) Shop support (scheduling and inspection).
  - (d) Emergency service (Trouble Desk).
  - (e) Central tool room (CTR).
2. Utilities.
  - (a) Electrical power generation and distribution.
  - (b) Plumbing, potable water, and waste water systems.

(c) Heating, ventilation, air-conditioning (HVAC),  
and  
refrigeration.

3. Transportation.

(a) Operations.

(1) Dispatching and licensing.

(2) Fuel storage and supply.

(3) Water supply.

(4) Refuse, sewage and hazardous waste collection  
and  
disposal.

(b) Maintenance.

(1) Civil Engineering Support Equipment (CESE).

(2) Generators.

(3) Non-medical equipment.

(4) Parts and tool room.

4. Fire, Safety, and Air Operations.

(a) Fire prevention and control.

(b) Safety.

Occupational Safety and Health (OSH).

(c) Air operations.

Foreign object and debris (FOD) control.

C. **PHYSICAL DESCRIPTION:**

1. Public Works Administration.

(a) Location within the complex:

(b) Sheltering.

Type: GP Tent.

Quantity: 1, shared.

(c) Material.

IOL: PAOA, PAOB, PAOC, PAOD, PAOF, PAOG, PAOH,  
PAOI, PAOJ, PAOK, PAOL, PAOM, POAP, PMOA,  
PMOB, PMOC, PMOD, PMOF, PMOG, PMOI, PMOJ,  
PMOM, PMOQ, PMOT, PMOU, PMOW, PMOX, PMAA,  
PMAE, PMCD, PMFC, PMFE, PMFF, PMRC, PTOA,  
PTOB, PTOC, PTOE, PTOF, PTOG, PTOK, PTOL,  
PTOM, PTON, PTOP, PTOQ, PTOT, PTOU, PTOV,  
PTOW, PTOZ, PTAA, PTAE, PTAF, PTAG, PTAJ,  
PTAK, PTAL, PTAM, PTAN

2. Facilities Maintenance - Builder Shop.

(a) Location within the complex:

(b) Sheltering.

Type: Maintenance Tent

Quantity: 1, shared.

(c) Material.

IOL: BSS1 - BSS5

3. HVAC Shop.

(a) Location within the complex:

(b) Sheltering.

Type: Maintenance Tent

Quantity: 1, shared.

(c) Material.

IOL:

4. Utilities Maintenance Shop.
  - (a) Location within the complex:
  - (b) Sheltering.

Type: Maintenance Tent

Quantity: 1, shared.
  - (c) Material.

IOL: C01A-C14A, E01A-E13A, EPS1-EPS6, P01A-P47A
5. Generator Maintenance Shop.
  - (a) Location within the complex:
  - (b) Sheltering.

Type: Maintenance Tent

Quantity: 1, shared.
  - (c) Material.

IOL: GMS1-GMS5, OXYA, OXYC, OXYE, OXYP
6. Transportation Operations.
  - (a) Location within the complex:
  - (b) Sheltering.

Type: GP Tent

Quantity: 1, shared.
  - (c) Material.

IOL: CCEA, CEOG, CEOI, CEOQ, CEOT, CEOV, CEOW, CEOY, CEOZ, CE1P-CE5P, CEAD, CEAG, CEAI, CEAJ, CEAK, CEAL, CEAM, CEAY
7. Transportation Maintenance.
  - (a) Location within the complex:
  - (b) Sheltering.

Type: Maintenance Tent

Quantity: 1, shared.

(c) Material.

IOL: CCEA, CEOG, CEOI, CEOQ, CEOT, CEOV, CEOW,  
CEOY, CEOZ, CE1P-CE5P, CEAD, CEAG, CEAI,  
CEAJ, CEAK, CEAL, CEAM, CEAY

8. Base Fire Station.

(a) Location within the complex:

(b) Sheltering.

Type: GP Tent

Quantity: 1, shared.

(c) Material:

IOL: BFOC, BFOE, BFOF, BFOV, HPOB, HPOC, MBFE

D. **SPECIAL CONSIDERATIONS:**

1. Daily requirements.

(a) Potable water: 26,000 gallons.

(b) Fuel.

(1) Diesel: 8,300 gallons.

(2) Gasoline: 200 gallons.

2. 10-miles maximum distance from base to CINC-identified supply point for potable water, fuel, refuse and sewage and hazardous waste disposal.

3. Non-OF-13 personnel must be cross assigned to augment  
PWD  
capabilities during peak workload state, for non-traditional  
PW  
functions (i.e., air ops, communications, etc.).

E. **WORKLOAD:**

1. Steady state: Daily operations and maintenance activities in all sub-functional areas for 12-hour work period and a 12-hour duty section after working hours.

2. Peak state: In addition to the daily routine, one or  
a  
combination of the following may occur:

(a) Emergency casualty repairs of utility system or equipment.

(b) Special details, i.e., air ops, combat alert, disaster ops, fire response, hazardous material/waste spill response, etc.

(c) Additional workload related to PW functions  
directed  
by higher authority without augmenting resources.

F. **ORGANIZATION:**

1. Responsibility.

(a) Commanding Officer. The Commanding Officer (CO)  
is  
responsible for the overall physical condition of the camp and will assure that sufficient resources are available for the operation and maintenance of facilities, utilities, and transportation equipment.

(b) Public Works Officer. The Public Works Officer  
(PWO)  
reports to the CO on all matters pertaining to the  
administration  
and operation of PWD.

(c) Assistant Public Works Officer. The APWO assists  
the  
PWO in the accomplishment of PW mission and is normally responsible to the PWO for the day-to-day operation and coordination of the organizational components of the department and for organization and training of special details.

(d) Maintenance Division Director. The MDD is responsible for the operation and maintenance of tents, ISOs, electrical system, plumbing system, water distribution system, engineering work control, and emergency service, CTR, fire prevention and safety.

(e) Transportation Division Director. The TDD is responsible for the operation and maintenance of all CESE and

MHE/WHE in accordance with NAVFAC P-300 and P-404, fuel and  
water  
supply, and refuse, sewage and hazardous waste collection and  
disposal.

2. Organizational chart. PWD is divided into two (2)  
divisions with a total of six (6) branches. (See TAB C.)

3. Staffing. The total strength of PWD including the PWO is 82.

(a) Criteria.

(1) Full compliment of the department will be required during routine operations and maintenance.

(2) Personnel will be cross-trained in all sub-functional areas.

(3) Four watch sections will be established.

(4) Fire control team functions, spill response, disaster recovery, etc., must be augmented by non-OF-13 personnel.

(b) Distribution.

<u>FUNCTION</u>	<u>SPEC/RTG</u>	<u>RANK/RATE</u>	<u>NO.</u>
PWO	CEC	04	1
PWO	CEC	02	1
APWO	CE/UT	E7/9	2
SHOPS ENGINEER	CU	E9	1
MAINTENANCE CHIEF	CE/UT	E8	1
TRANSPORTATION CHIEF	EO/CM	E7	2
FIRE MARSHALL	DC	E6	1
BUILDING TRADES	BU	E7	1
ADMIN ASSISTANT	YN	E5/6	2
FACILITIES		E6/E5/E4/E3/Below	
SUPPORT BRANCH	EA		1
	BU	3 1 1	5
	SW	1 1	2
	EN	1	1
	MM	1 1	2
	ET	1 1	2
ELECTRICAL	CE	3 3 1 2	9
PLUMBING/HAVAC/ REF BRANCH	UT	7 8 2 8	25
OPERATIONS BRANCH	EO	1 2 3 3	9
MAINTENANCE BRANCH	CM	4 2 7 1	14

4. Assignment by billet sequence code (See TAB A, Page 16).

5. Watch bill.

PWD watch bill: (See TAB B, Page 18).

- (a) Watch Section - I, II, III.
- (b) Section Leader (Petty Officer of the Watch) -  
POOW -E5/6.
- (c) Assistant Section Leader/Duty Dispatcher -  
APOOW - E4/5.
- (d) Duty Electrician - Duty CE - E4/5.
- (e) Duty Plumber - Duty UT - E4/5.
- (f) Duty Driver - Duty EO - E3/4.
- (g) Duty Mechanic - Duty CM - E4/5.
- (h) Roving Patrol - E3/Below.

6. Special watch: N/A

G. **TASKS:**

TASK		METHOD
1. MAINTENANCE DIVISION	1.1	Operate and manage the utilities system within applicable NAVFACENGCOM performance criteria.
	1.2	Plan, manage and operate utility systems.
	1.3	Schedule shut-down time for equipment and system maintenance and overhaul as approved by PWO.
	1.4	Identify utility system maintenance, repair, construction and alteration requirements.
	1.5	Establish a preventive maintenance inspection system (PMI) I.A.W.

NAVFAC  
MO-322.

1.6 Monitor the efficiency  
of  
utility systems and  
equipment. Update  
utility  
line diagrams and  
allocation data.

1.7 Operate and maintain a  
division tool room IAW  
  
Central Tool Room Guide  
(See TAB C-9).

1.8 Provide supervision for  
camp assembly and  
disassembly.

## 2. ELECTRICAL BRANCH

equipment.

2.1 Operate all  
electrical/generating,  
distribution systems,  
components, and

Responsible for all  
electrical equipment  
devices and systems

2.2 Inspect electrical  
systems, from the  
generators components,  
  
equipment. up to and  
including receptacle  
outlets.

2.3 Provide emergency  
electrical  
service/repair  
as necessary.

2.4 Coordinate and control  
all  
scheduled electrical  
outages.

2.5 Relocate power groups  
as  
necessary I.A.W.

and

		Special Considerations.
3. PLUMBING/HEATING VENTILATION, AIR CONDITIONING BRANCH	3.1	Operate heating and ventilation air conditioning system and water and waste water distribution systems, components, and
equipment.		Responsible for
operation		and maintenance
HVAC	3.2	Operate and maintain and of all
plumbing, all		water treatment units.
conditioners,		systems, air
		heaters.
waste	3.3	Inspect all HVAC, water and water treatment
		systems, components,
and		refrigeration units,
		and equipment.
	3.4	Monitor water and waste water alarm systems and
		provide emergency services/repair as necessary. Notify Preventive Medicine of potable or waste water system disruption.
	3.5	Coordinate and control all
		scheduled utility outages.
4. FACILITIES SUPPORT BRANCH	4.1	Provide facility Maintenance/repair in trades services i.e., tentage,
carpentry,		paint, sheet metal, welding, and similar

		work. Responsible for repairs to windows, doors, tentage
IAW	4.2	Perform facility PMI
containers.		MO-322.and ISO
Any	4.3	Production control:
		Major repairs develop alterations require detailed shop execution schedules, approval of
the		PWO. assure that
material		and equipment are effectively used and reported against proper job order numbers.
	4.4	Personnel assignment: assure personnel are effectively assigned to perform work schedules.
	4.5	Material control: assure that material is delivered to work sites as scheduled.
	4.6	Identify material required for all planned work.
	4.7	Prepare job plans including manpower and material cost

5. TRANSPORTATION  
maintenance/ DIVISION  
file.

certification

- 4.8 Receive, screen, and  
classify all work  
requests.
- 4.9 Maintain technical  
library.
- 5.1 Maintain CESE  
repair
- 5.2 Ensure CASE/MIS records  
are kept current by  
registration and  
disposition of CESE,  
MHE,  
and attachments.  
  
Supervise, control and  
coordinate tasks as  
assigned and maintain  
active MHE  
  
IAW P-300.
- 5.4 Establish dispatch  
procedures to control  
usage of assigned  
equipment and provide  
operators when  
required.
- 5.5 Develop a crane  
test/certification  
program  
to ensure safe  
operation  
of all weight handling  
equipment (WHE). Refer  
to  
NAVFAC P-300 for  
detailed  
crane nomenclature  
description.
- 5.6 Establish a complete  
preventive maintenance  
and  
repair program (PMI)  
for

all CESE and MHE.

5.7 Assign a "Yard Boss" to enforce traffic control through the equipment yard to ensure operator maintenance procedures are performed, cycle under-used equipment, monitor refueling station and wash rack. Coordinate equipment awaiting entry into shops.

5.8 Assign a "Road Master" to enforce traffic control throughout the camp and ensure operator compliance with safe driving directives.

6. OPERATIONS  
BRANCH

6.1 Implement a license operator program for selection, training, qualification and supervision of operators.

6.2 Pursue an aggressive safety program for protection of personnel and government property and assign an accident investigator to manage the vehicle accident investigation program.

6.3 Assign a collateral equipage custodian to control and manage both tactical and component collateral equipage.

6.4 Provide personnel to

establish and work the  
tire shop.

- 6.5 Provide fuel service to stationary equipment.
- 6.6 Schedule drivers and CESE to meet supply and disposal requirements of potable water and sewage.
- 6.7 Schedule drivers and CESE to meet refuse and hazardous waste collection and disposal requirements.
- 6.8 Provide crane and rigging service.

## 7. MAINTENANCE BRANCH

- 7.1 Provide on-site PMI for stationary equipment.
- 7.2 Manage POL usage, stock, and resupply.
- 7.3 Provide POL service to stationary CESE.
- 7.4 Maintain repair parts accountability, control IOLs, and technical manuals.
- 7.5 Establish a safe and functional battery shop.
- 7.6 Operate and maintain tool room accountability.
- 7.7 Provide personnel and technical support for

the  
tire shop.

7.8 Assign personnel for  
field  
service repairs.

## 8. FIRE DEPARTMENT

8.1 Respond to any of the  
following but not all  
inclusive list of  
emergencies:

- Fire.
- Accidents involving  
automobiles,  
cranes,  
or heavy equipment.
- Any accident  
causing  
potential hazard.
- Any emergency  
requiring the use  
of  
ladders.
- Any other incident  
that might be  
alleviated by Fire  
Division action  
(i.e.,  
smoke smell,  
electrical arcing  
downed or exposed  
wire).

8.2 Request ambulance  
response  
when incident so  
requires.

8.3 Provide and maintain  
suitable fire apparatus  
for all helicopter  
take-  
offs and landings IAW  
NAVAIR 00-80R-14.

8.4 Charge, distribute, and  
maintain a fire

extinguisher location  
plan  
for all classes of fire  
extinguishers.

- 8.5 Conduct fire fighting,  
prevention and  
inspection  
training for all  
personnel  
as required.
- 8.6 Conduct fire prevention  
inspections I.A.W.  
Fleet  
Hospital Fire  
Regulations.
- 8.7 Conduct safety  
inspections.
- 8.8 Executes the programs  
and  
policies of PWD and  
other  
higher authorities  
relating to safety on a  
daily basis.
- 8.9 Directs and coordinates  
safety measures during  
services operations and  
maintenance functions.
- 8.10 Directs safety  
inspection  
services, enforces  
corrective measures of  
all  
deficiencies are done  
correctly and timely.
- 8.11 Conducts safety  
training.
- 8.12 Provides assistance  
during  
air operations, ensures  
helipad is always clear  
of  
FOD.

- H. **STANDARD OPERATING PROCEDURES:** (See TAB C, Page 24)
- I. **CLINICAL POLICIES/GUIDELINES:** N/A
- J. **STANDARDS AND JOB DESCRIPTIONS:** (See TAB D, Page 68)
- K. **DOCUMENTATION:**
1. References (See TAB E, Page 83)
2. Forms (See TAB F, Page 86)

**TAB A**

**ASSIGNMENT BY BILLET SEQUENCE CODE**

BILLET #	TITLE	DES/RATE	RANK
11029	Public Works Officer	5100	0-4
11049	Public Works	5100	0-2
11019	Shops Engineer	0000/UC	E-9
11039	Admin. Assistant	0000/YN	E-6
11059	Admin. Assistant	0000/YN	E-5
11079	Maintenance Supv.	0000/UT	E-8
11099	Maintenance Asst.	0000/UT	E-6
11101	Maintenance Asst.	0000/UT	E-6
11103	Maintenance Asst.	0000/UT	E-6
11119	Building Trades	0000/BU	E-7
11139	Building Trades	0000/BU	E-6
11159	Carpenter Shop	0000/BU	E-6
11179	Carpenter Shop	0000/BU	E-5
11199	Carpenter Shop	0000/BU	E-4
11219	Vehicle Equip. Repair	0000/CM	E-4
11221	Vehicle Equip. Repair	0000/CM	E-4
11239	Support Shop	0000/CM	E-4
11259	Metal Trades	0000/UT	E-6
11279	Plumbing	0000/UT	E-5
11299	Plumbing	0000/UT	E-3
11319	Welding	0000/SW	E-6
11339	Welding	0000/SW	E-4
11359	Emerg. Services	0000/CE	E-6
11379	Emerg. Services	0000/UT	E-5
11399	Electrical Shop	0000/CE	E-7
11419	AC/Refrig. Shop	0000/UT	E-6
11439	AC/Refrig. Shop	0000/UT	E-5
11459	AC/Refrig. Shop	0000/UT	E-3
11479	Electrician	0000/CE	E-4
11499	Electrician	0000/CE	E-3
11501	Electrician	0000/CE	E-3
11503	Electrician	0000/CE	E-3
11505	Electrician	0000/CE	E-3
11519	Communications	0000/CE	E-5
11521	Communications	0000/CE	E-5
11539	Communications	0000/CE	E-5
11559	Roads and Grounds	0000/EO	E-5
11579	Refuse and Disposal	0000/EO	E-5
11599	Refuse and Disposal	0000/EO	E-3
11619	Pest Control	0000/UT	E-5
11659	Power Plant	0000/CE	E-5
11679	Power Plant	0000/CE	E-3
11699	Power Plant	0000/EN	E-6

BILLET #	TITLE	DES/RATE	RANK
11719	Power Plant	0000/CM	E-5
11739	Power Plant	0000/CM	E-4
11759	Boiler Crew	0000/UT	E-6
11779	Boiler Crew	0000/UT	E-5
11799	Distribution	0000/UT	E-7
11819	Power Line Crew	0000/CE	E-6
11839	Power Line Crew	0000/CE	E-5
11841	Power Line Crew	0000/CE	E-5
11859	Power Line Crew	0000/CE	E-4
11879	Power Line Crew	0000/CE	E-3
11899	Water Sewer Treatment	0000/UT	E-6
11919	Water Sewer Treatment	0000/UT	E-4
11939	Water Sewer Treatment	0000/UT	E-3
11941	Water Sewer Treatment	0000/UT	E-3
11959	Transportation	0000/EO	E-7
11979	Dispatcher	0000/EO	E-6
11999	Driver	0000/EO	E-4
12001	Driver	0000/EO	E-4
12003	Driver	0000/EO	E-4
12019	Driver	0000/EO	E-3
12039	Equipment Maintenance	0000/CM	E-7
12059	Inspection	0000/CM	E-6
12079	Vehicle Equip. Repair	0000/CM	E-6
12081	Vehicle Equip. Repair	0000/CM	E-6
12083	Vehicle Equip. Repair	0000/CM	E-6
12099	Vehicle Equip. Repair	0000/CM	E-5
12119	Vehicle Equip. Repair	0000/CM	E-4
12121	Vehicle Equip. Repair	0000/CM	E-4
12139	Support Shop	0000/CM	E-4
12159	Support Shop	0000/CM	E-3
12179	Support Shop	0000/EO	E-3
12199	Inspections	0000/BU	E-6
12219	Eng. and PE	0000/EA	E-6
12239	N <sub>2</sub> O <sub>2</sub> Plant Supv.	0000/MM	E-6
12259	N <sub>2</sub> O <sub>2</sub> Plant Operator	0000/MM	E-5
12279	Communications	0000/ET	E-5
12299	Communications	0000/ET	E-4
12319	Fire Marshal	0000/DC	E-6

**TAB B**

**PUBLIC WORKS WATCH BILL**

A. **PURPOSE:** To establish PWD operations beyond 12-hour work day.

B. **DEFINITION:** The PWD watch bill will be maintained independent from the routine Command Watch Bill. The Duty Section Leader (POOW) however, reports to the Command Duty Officer.

1. Four duty sections will be established.

2. Hazardous waste spill response team will be maintained separately.

3. Contingency teams will be maintained as needed.

4. Fire station watch will be an integral responsibility of the duty section.

5. Duty fire captain will be on call status at all times.

The fire team will be maintained by assigned personnel from ALL departments on rotation basis.

6. Section leader (POOW) (E6) is responsible for all facility/utility/equipment after normal working hours. Serves as a backup for fire marshall.

7. Assistant Section Leader (APOOW) and Duty Dispatcher (E5) is responsible for coordinating all activities, dispatching vehicles after normal working hours and maintaining the following:

(a) Duty Log Book.

(b) Trouble Call Log.

(c) Recall Bill.

(d) Locator Log/Wakeup Log.

(e) Fire Bill.

- (f) Hazardous Waste Spill Bill.
  - (g) Contingency Bill.
  - (h) Vehicle Dispatch Log.
8. Roving Patrol (E3) will:
- a. Provide area fire, security, and utility surveillance reporting hourly to APOOW.
  - b. Take readings and make log entries of critical fuel/temperature gauges as designated by Duty CE/UT.
9. Duty Electrician (CE) will accomplish work as assigned and will be on call after 2100 hourly services as a fire team member when directed.
10. Duty Utilitiesman (UT) will accomplish work as assigned and will be on call after 2100, serves as a fire team member when directed.
11. Duty Mechanic (CM) will accomplish work detail and will provide emergency equipment repair.
12. Duty Driver (EO) will provide services as required.

**TAB B**  
**WATCH BILL**

SECTION I

<u>Billet</u>	<u>Rate/Rank</u>	<u>Remarks</u>
12319	DC1	Fire Marshal
11419	UT1	POOW
11179	BU2	APOOW
11379	UT2	Duty UT
11221	CM3	Duty CM
11659	CE2	Duty CE
12001	EO3	Duty Driver
11259	UT1	Fire Capt
12121	CM3	Fire Team
12179	EOCN	Fire Team
12159	CMCN	Fire Team
12259	MM2	Fire Team
11299	UTCN	Fire Team
11499	CECN	Fire Team
11859	CE3	Roving Patrol

**TAB B**  
**WATCH BILL**

SECTION II

<u>Billet</u>	<u>Rate/Rank</u>	<u>Remarks</u>
11019	CE1	POOW
12279	ET2	APOOW
11379	UT2	Duty UT
11239	CM3	Duty CM
11839	CE2	Duty CE
11999	EO3	Duty Driver
11139	BU1	Fire Capt
12299	ET3	Fire Team
12019	EOCN	Fire Team
11219	CM3	Fire Team
11459	UTCN	Fire Team
12139	CM3	Fire Team
11501	CECN	Fire Team
11199	BU3	Roving Patrol

**TAB B**  
**WATCH BILL**

SECTION III

<u>Billet</u>	<u>Rate/Rank</u>	<u>Remarks</u>
12059	CM1	POOW
11521	CE2	APOOW
11619	UT2	Duty UT
12099	CM2	Duty CM
11841	CE2	Duty CE
11559	EO2	Duty Driver
11319	SW1	Fire Capt
11739	CM3	Fire Team
11599	EOCN	Fire Team
11679	CECN	Fire Team
11939	UTCN	Fire Team
11339	SW3	Fire Team
11503	CECN	Fire Team
11919	UT3	Roving Patrol

**TAB B**  
**WATCH BILL**

SECTION IV

<u>Billet</u>	<u>Rate/Rank</u>	<u>Remarks</u>
12199	BU1	POOW
11779	UT2	APOOW
11279	UT2	Duty UT
11719	CM2	Duty CM
11519	CE2	Duty CE
11579	EO2	Duty Driver
11699	EN1	Fire Capt
12119	CM3	Fire Team
12003	EO3	Fire Team
11879	CECN	Fire Team
11941	UTCN	Fire Team
11539	ET2	Fire Team
11505	CECN	Fire Team
11479	CE3	Roving Patrol

**TAB C**  
**STANDARD OPERATING PROCEDURES**  
**INDEX**

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
C-1	WORK CLASSIFICATION	25
C-2	INSPECTION PROGRAM	29
C-3	JOB SCHEDULING	31
C-4	MATERIAL MANAGEMENT	34
C-5	ELECTRICAL POWER CONTINGENCIES	36
C-6	POTABLE WATER CONTINGENCY	37
C-7	VEHICLE ASSIGNMENT	38
C-8	VEHICLE EQUIPMENT DISPATCHING	40
C-9	CENTRAL TOOLROOM PROCEDURES	43
C-10	ENVIRONMENTAL ISSUES	50
C-11	RECORD KEEPING	52
C-12	CLEANING SCHEDULE	54
C-13	HAZARDOUS WASTE	56
C-14	COLD WEATHER PROCEDURES	62

## TAB C-1

### WORK CLASSIFICATION

A. **PURPOSE:** To provide a method to prioritize service work.

B. **DEFINITION:**

1. Work is classified into three categories depending on urgency, duration and repetitive nature: emergency/service work, specific job orders and standing job orders.

2. All work requiring immediate action or any minor work requiring less than 16 man hours and \$100 in material costs for accomplishment is classified as emergency/service work.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. When work is of an emergency nature, the requestor will:

(a) Report the problem to the trouble desk.

(b) Provide the following information:

(1) Name, telephone number, and rate.

(2) Urgency of requirement.

(3) Location of trouble.

(4) Nature of requirement (work description).

(c) Ask for the service call number assigned.

(d) Sign the completed service chit to indicate that he is satisfied that the work has been accomplished.

2. The Trouble Desk will:

(a) Collect the information required by the service chit.

(b) Provide the requestor with the service call identification number assigned from the service call log book.

In the identification number, the first digit shall indicate the last digit of the current fiscal year and the remaining digits shall give the chronological order in which the chit was issued. For example, the fifty-second chit issued in FY 87 would have the following number: 7/52.

(c) Complete five copies of the service chit and enter the information required in the service call log.

(d) Forward all copies of the chit to the Maintenance Chief for review and approval. In case of emergency, immediately notify the appropriate shop or individuals prior to completing the chit.

(e) On completion of the emergency/service work, review the chit

(f) Sign the completed service chit to indicate that he is satisfied that the work has been accomplished.

### 3. The Maintenance Chief will:

(a) Review requested work for accuracy and completeness of information.

(b) If service chit is beyond the scope of service work or is not of emergency nature, forward it to the P&E section for development of a job order. If the chit is for construction or alteration work, forward the chit to the requestor (via the trouble desk for cancellation) indicating that the requested work is beyond the scope of a service call and requires the initiation of a work request.

(c) If the chit qualifies as service work, authorize accomplishment by initialing the service chit and forward to

the  
appropriate shop for accomplishment.

(d) When work is completed and signed by the  
customer,  
review the completed chit and forward to the trouble desk.

4. The Shop Supervisor will:

(a) On receipt of a service chit from the Maintenance  
Chief, integrate the work into the shop schedule as work load  
permits and the priority (emergency/routine) of the job  
dictates.

(b) Insure all service chits are signed by the  
requestor  
(or senior individual present) prior to returning them to the  
Maintenance Chief.

5. CMO shall review the trouble call log weekly.

6. When work is a routine nature, the requestor will:

(a) Initiate a work request by completing blocks 1  
through 8 of work request and submitting it to his  
Department Head through the normal chain of command.

(b) The Department Head will screen the work request  
for  
need and accuracy. Sign and date block 10, retain one copy  
for  
his files, and forward the remaining copies to the Maintenance  
Chief.

7. The Maintenance Chief will:

Obtain a rough estimate of the work from the P/E  
section of Camp Maintenance and enter in block 13 of work  
request.

8. The CMO will review work request and complete blocks  
15,  
16, and 17 of the work request and return to the Maintenance  
Chief.

9. The Maintenance Chief will:

(a) All work requiring over 16 man-hours shall be  
considered a Specific Job Order and shall be identified by the  
following code: MCD-XXX-YY, In which XXX is the chronological  
order in which the work request was received and YY is the  
fiscal

year.

(b) Forward one copy of the work request to the requestor in order to provide feedback on action take.

(c) Direct completion of the planning and estimating work utilizing the Cost Estimating Form and the Work Authorization/Estimate Form.

(d) Review the planning and estimating work and bill of material when completed. When satisfied, sign block 23 of the Work Authorization/Estimate Form.

(e) Submit a copy of the bill of material (BM) and all NAVSUP Form 1250's to the Supply Department for material procurement. See TAB C-4 for material management details.

(f) Place on Job Requirements and Status Chart. The chart shall serve as a visual display of the status of all specific and standing job orders. It shall be located for easy reference by management personnel and shop supervisors. All known job orders shall be entered and remain until completed or cancelled. The chart shall contain the following information:

- (1) Job order number.
- (2) Description.
- (3) P&E completion date.
- (4) Material ordered date.
- (5) Material received date.
- (6) Planned start date.
- (7) Planned completion date.
- (8) Estimated cost.
- (9) Estimated man-hours (by shop).
- (10) Remarks.

10. Upon receipt of materials, scheduled job for

accomplishment.

11. Standing job orders (SJO's) shall be written for all work that is highly repetitive in nature. Each SJO should include an exact description of the work to be accomplished and a clearly specified frequency cycle. The camp's standing job order file, once established, should be a continuous program which is not affected by battalion turnovers. Following work is not considered appropriate for standing job order: plaques, mount-out boxes, footlockers, road signs, and grade stakes. The Maintenance Chief should make periodic reviews of the existing standing jobs and revise, update, and delete/add new jobs as necessary.

F. **RESPONSIBILITY:** N/A.

## TAB C-2

### INSPECTION PROGRAM

A. **PURPOSE:** To provide guidelines for a systematic, continuous inspection program. The following types of inspections constitute the core of this program.

B. **DEFINITION:**

1. Control inspection is the process of inspecting all camp facilities to determine the maintenance work load which will be required during the deployment to preserve or improve the condition of camp structures and property.

2. Dynamic Equipment Inspection/Service (DEIS) is intended to reduce the breakdown and requisite repair to designated dynamic equipment. This inspection is a systematic and periodic examination, lubrication, and minor adjustment of dynamic equipment. The scope of servicing involves duties such as oiling, greasing, cleaning, and tightening, which prevent accelerated deterioration. Any work beyond this level is to be accomplished through initiation of a service chit or work request as appropriate.

3. The operator's inspection consists of examination, lubrication and minor adjustments. Operator inspection of constantly attended equipment is similar to DEIS but performed by the operators as part of their day-to-day responsibilities.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. The Inspection Branch shall be responsible for conducting a control inspection within the first 30 days of the deployment and will:

(a) Identify each facility by number and area

designation.

(b) Prepare an inspection schedule including facility number, category code and description.

(c) Inspect facility on scheduled dates. Record condition on an Inspector's Report. Enter complete details, including cost estimate, of work required to correct deficiencies.

(d) Forward the completed reports to PWO, with a copy to the appropriate facility history jacket.

(e) Based on the results of the inspection, the PWO shall prepare a list of deficiencies in priority order to be corrected during the course of the deployment.

2. The Inspection Branch is responsible for DEIS and will:

(a) Inventory all dynamic equipment that meets the following criteria:

(1) Would impair the operational efficiency of the unit should a breakdown occur.

(2) Would present a safety hazard in the event of breakdown or damage.

(3) Are more cost effective to repair than replace.

(4) Require a long lead time to replace or procure repair parts.

(b) Review manufacturer's brochures to determine the required routine maintenance.

(c) Prepare a DEIS check-off card for each piece of dynamic equipment to be used by the inspection team (1 CE and 1 UT).

(d) Update the maintenance plan.

(e) Evaluate the inspector's reports and initiate any required corrective action.

(f) DEIS check-off cards will not be discarded or destroyed when new cards are required. The new card will

be  
stapled to the front of the old DEIS card to show a continuous  
record of inspection/service for each piece of equipment.

(g) The PWO will conduct periodic random checks of  
the  
DEIS. These checks will consist of visual inspection and  
verification of work.

F. **RESPONSIBILITY:** N/A.

**TAB C-3**

**JOB SCHEDULING**

A. **PURPOSE:** To provide guidelines for deliberating scheduling work.

B. **DEFINITION:** Job scheduling will consist of a weekly maintenance planning meeting and a semi-monthly shop load plan meeting. It is designed to permit advance planning by the shops for all work except emergency/service. DEIS generated work and work authorized under standing job orders will also be scheduled.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. A Maintenance Planning Meeting shall be held each week.  
The attendees include the PWO, Maintenance Chief, and Shop Supervisors. The purpose of this meeting is to schedule the work of the camp maintenance force. Shop loading for the following week will be discussed and finalized at this time.

2. A Shop Load Plan Meeting shall be held twice monthly.  
The Manpower Availability Summary and the Shop Load Plans shall be prepared in advance by the Camp Maintenance Scheduling Branch and submitted for review and approval by the PWO.

3. The Manpower Availability Summary shall be prepared by the Maintenance Chief to aid in the preparation of the shop load plan by providing projections of expected manpower availability by rate.

(a) Block 1: Current shop manpower available by rate (Current On-Board).

(b) Block 2: Anticipated gains or losses during the upcoming month.

(c) Block 3: Average personnel available for the period.  
Sum of Blocks 1 and 2.

(d) Block 4: Block 3 x working days in period.

(e) Blocks 5 and 6: Estimated number of man-days devoted to supervision and project support, based on historical data and trends and modified by anticipated changes or management actions.

(f) Block 7: Man days involved in scheduled deployment leave.

(g) Block 8: Estimated man-days involved in general administrative matters, sick call, dental recall and scheduled training evolutions including safety lectures.

(h) Block 9: Sum of blocks 5 through 8.

(i) Block 10: Man-days allocated to specific job orders.

(j) Block 11: Man-days allocated to standing job orders.

(k) Block 12: Man-days allocated to emergency/service work based on historical data.

(l) Block 13: Sum of blocks 10 through 12. Compare to block 4 minus block 9.

4. Shop Load Plan-Specific Job Orders will be prepared as follows:

(a) Jobs will be listed in blocks 1 and 2 in descending order of priority.

(b) Blocks 3 through 7 indicate desired utilization of manpower based on priority of project, man-hours required to complete a job, and manpower availability.

(c) Block 8 indicates the planned start date.

(d) Block 9 indicates the cumulative man-days expended to date.

(e) Block 10 indicates the total estimated man-days for the specific job orders.

(f) Block 11 is utilized to note work assigned to other companies if priority and availability of shop personnel will not permit completion within an acceptable time frame.

5. Shop load Plan-Standing Job Orders will be prepared as follows:

(a) List all standing job orders with a brief narrative description in blocks 1 and 2.

(b) Blocks 3 through 8 indicate planned utilization of manpower.

(c) Block 9 indicates the cumulative man-days expended to date.

6. In order for management to evaluate the effectiveness estimating and manpower utilization and to remain informed on the overall performance of the shops, the shop load plan shall be annotated at the end of each reporting period to indicate actual start and end dates and productive labor expended on each job order. In addition, the Manpower Availability Summary/Work Plan Summary shall be annotated to reflect actual man-days achieved, including the percentage breakdown. Target percentages are 20% emergency/service work, 30% standing job orders, and 50% specific job orders. One copy of each annotated form shall be forwarded to PWO, and one each shall be retained by the Maintenance Chief.

7. Total actual productive man-days expended for camp maintenance (block 13) shall be charged as direct labor and reported on the operations SITREP as Job Order XXX-400, camp maintenance.

8. Since maintenance is an ongoing process, all records of specific jobs, standing jobs, and service calls are to be retained in their respective facility/equipment history jacket.

F. **RESPONSIBILITY:** N/A.

**TAB C-4**

**MATERIAL MANAGEMENT**

A. **PURPOSE:** To identify responsibility for the planning and estimating of all material requirements, the drafting of BM's, the initiation of NAVSUP Forms 1250 and the accounting of a Camp Maintenance 1250 log.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:** N/A.

E. **STEPS:**

1. The Camp Maintenance 1250 log will contain information that can be used to establish a reliable budget for the Camp Maintenance program. It will include:

- (a) Requisition number.
- (b) Line item description.
- (c) Estimated cost.
- (d) Actual cost.
- (e) Balance on hand.
- (f) Julian date material received.
- (g) Pipeline dollars.

2. Material will be ordered on a Form 1250 as outlined in TAB J. The Material Expediter will establish an index file using a copy of the BM supplied by the Camp Maintenance Chief. The same guidelines as established for project materials will be used by the Material Liaison Office in the staging and control of camp maintenance materials.

3. Upon completion of the job order, the green copy of the completed Form 1250, BM's and other related paperwork will be filed in the facility history jacket for historical purposes.

4. The PWO or the Camp Maintenance Chief are the only individuals authorized to transfer material from one job order to another once the material is stage in MLO.

F. **RESPONSIBILITY:** N/A.

## TAB C-5

### ELECTRICAL POWER CONTINGENCY

A. **PURPOSE:** To establish general procedures to administer generator failures.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:**

1. Medical core and other priority functional areas  
continue  
to operate.

2. Functional priority within the Fleet Hospital complex  
is  
established.

E. **STEPS:**

1. Upon receipt of report, trouble deck dispatches  
electrical/generator repair crew to emergency site.

2. If back-up generator is not in operation, activate,  
and  
notify users.

3. Disconnect disabled generator, diagnose problem and  
execute repair if within capability.

4. If problem is beyond organic capability CASREP unit  
and  
requisition immediate replacement through supply department.

5. Substitute a generator from an area of lower critical  
priority IAW TAB D-13.

6. Notify users when temporary back-up power is in place.

F. **RESPONSIBILITY:**

1. Senior PO in functional areas affected.

2. Electrical branch supervisor.

## TAB C-6

### POTABLE WATER CONTINGENCY

A. **PURPOSE:** To establish general procedures to implement emergency service.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:**

1. Medical Core and other priority functional areas continue to operate.

2. Functional priority within the Fleet Hospital complex is established.

E. **STEPS:**

1. Upon receipt of report, trouble desk dispatches plumbing repair crew to emergency site.

2. Diagnose problem and execute repair if within capability.

3. If problem is beyond repair, notify Preventive Medicine and substitute a BCH or MUM from an area of lower critical priority IAW TABs D-14.

4. Notify users when service is restored.

F. **RESPONSIBILITY:**

1. Senior PO in functional area affected.

2. Utilities branch supervisor.

TAB C-7

VEHICLE ASSIGNMENT

A. **PURPOSE:** To establish vehicle assignment procedures.

B. **DEFINITION:** The PWO will assign vehicles/equipment to each requirement through the operations section - dispatcher. The categories of automotive vehicle assignments are:

1. Class "A" Dispatch. The exclusive assignment of a vehicle to an individual, made only when authorized by the CO.

2. Class "B" Dispatch. The recurring assignment of the same vehicle to a department for the effective conduct of business.

3. Class "C" Dispatch. Also known as Motor Pool; assignments on an as-needed basis for authorized daily or individual trips.

(a) On-call service. Operators and equipment are assigned from the equipment pool to fill requests.

(b) U-drive-it dispatch. Pool vehicles are made available for operation by the user.

(c) Taxi-service. Vehicles are normally dispatched on a first-come, first-serve basis.

(d) Scheduled service this is normally a shuttle bus or loop-type service which provides intra-base personnel movement.

4. Construction equipment. Assignment of construction/ material-handling equipment, etc., is usually assigned to a job or office and dispatched with an operator from the equipment pool.

5. Assignment of vehicles will be IAW NAVFAC P-404.

C. **EQUIPMENT, SUPPLIES, AND REQUIRED FORMS:** N/A.

D. **CRITERIA:**

1. When assigning equipment apply the following criteria:

(a) Permanently assign the fewest vehicles necessary to accomplish commitments.

(b) Match equipment type, size, and capacity with the job.

(c) Assign equipment only to jobs that be accomplished safely.

(d) Class B assignment shall not be made if it is possible to use pool vehicles.

(e) PWO will approve all Class A and B assignments.

(f) Class B vehicle assignments shall be frequently reviewed to ensure that vehicles requirements remain valid.

(g) Vehicle pools provide the operations section maximum control over equipment and ensure efficient and economical vehicle use.

E. **STEPS:**

1. Customer requests vehicle from dispatcher by telephone, walk-in or in writing. Requestor indicates:

(a) Time and date required.

(b) Description of the job requirement.

2. Dispatcher establishes quantity/type best suited to fill request utilizing Status Board and/or Dispatch Log.  
Dispatcher:

(a) Establishes priorities of service and advances requester.

(b) Updates Dispatch Log.

3. Requester checks out equipment.

4. Dispatcher dispatches equipment IAW dispatching procedure.

F. **RESPONSIBILITY:**

1. PWO.
2. Transportation director.
3. Operation supervisor.
4. Dispatcher.

## TAB C-8

### VEHICLE/EQUIPMENT DISPATCHING

A. **PURPOSE:** To establish procedures for dispatching vehicles.

B. **DEFINITION:**

1. Equipment Status Board. A list of all vehicles/CESE assigned to the Fleet Hospital showing current status in color codes.

(a) Black - In service, operational.

(b) Red - Deadline.

(c) Green - Pending replacement (shipment, excess, disposal).

(d) Orange - Equipment ordered into the activity.

(e) Blue - Detached, borrowed, loaned.

2. Dispatch Log. The day-to-day record of all vehicles and equipment dispatched showing vehicle's operator and location, equipment available to be dispatched and scheduled equipment.

3. Vehicle/Equipment Request. Commonly called a trip ticket; the only proper authorization form for vehicles or equipment.

4. Daily PM Report. Commonly called the hard card; serves as an operator's maintenance check list utilized for transmitting information about deficiencies detected by the operator during inspection or operation.

C. **EQUIPMENT, SUPPLIES, AND REQUIRED FORMS:**

1. Equipment Status Board.

2. Dispatch Log.

3. DD Form 1370 - trip ticket.

4. NAVFAC 11260/4 - Hard card.

5. Operator's Report of Motor Vehicle Accident (SF-91).

6. U.S. Government Operators License (SF-46) or NAVFAC  
Form

11260/2.

D. **CRITERIA:**

1. Equipment resources are used efficiently and effectively.

2. Current status and location of assigned equipment is maintained in order to evaluate and schedule requests for equipment and services.

3. Equipment is properly dispatched prior to each use.

4. Unsafe equipment is not dispatched for use.

E. **STEPS:**

1. Request Procedure. Individuals requesting a U-drive  
it  
vehicle will submit a request to the dispatcher. The request  
should be delivered as much in advance of the use as possible.

When dispatcher receives a request he will schedule the  
equipment.

2. Dispatching procedure. Each trip ticket must contain  
the  
following:

(a) Calendar date the equipment is to be used.

(b) Type of equipment as designated in the equipment  
log.

(c) Equipment USN number or serial number.

(d) Organization to which the equipment is assigned.

(e) Name of the equipment operator.

(f) Operator's signature.

3. After all required entries are made on the trip ticket  
and Dispatch Log, the trip ticket is furnished to the  
operator.

Dispatcher will update the Equipment Status Board. An  
Operator's

Maintenance Form, SF91 must be provided with the trip ticket.

4. Operator must perform the operator's maintenance and complete SF-91.

5. Return procedures.

(a) Operator will fill in "in" mileage and hours and note any relevant trip information in remarks section of the trip ticket.

(b) Operator will remove all trash, debris etc., from the equipment.

(c) The dispatcher will review the trip ticket for accuracy, and ensure that all required information has been entered.

(d) The dispatcher will complete Dispatch Log, update the Status Board as necessary, and file the trip ticket for future reference.

F. **RESPONSIBILITY:**

1. PWO.
2. Transportation director.
3. Operations supervisor.
4. Dispatcher.
5. Operator.

## TAB C-9

### CENTRAL TOOLROOM PROCEDURES

A. **SCOPE**. The Central Toolroom (CTR) manages that portion of the Fleet Hospital TOA which consists of items such as hand and power tools, tradesman's tool kits and other special tools. These assets require strict inventory management, maintenance of separate records for individual items, scheduled physical inventories, and scheduled preventive maintenance. The nature of these assets being pilferable, easily convertible to personal use and, in general, expensive, dictates that a high level of security measures and accountability procedures be instituted.

#### B. **STAFFING AND TRAINING**.

1. Personnel. The following recommended staff should be identified and assigned as CTR personnel to ensure timely and sufficient training. A minimum of two forklift operators is recommended.

POIC:	BU2
Counterman/Warehouseman	PO3/SN
Storekeeper **	SK2
PMI: **	
Electrical	CE2/3
Small Engine, Gas Driven	CM3/CN

\*\* Work will be preformed by personnel from the appropriate shops.

2. Training. Seabee Construction Battalion Training (SCBT) courses and/or factory training on the maintenance and repair of power tools (electric, pneumatic, and small gas engine driven) are recommended for preventive maintenance (PM) personnel. NCTC's provide SCBT courses and CESO coordinates factory training in this area.

#### C. **INVENTORY MANAGEMENT**.

1. Records and Files.

(a) NAVSUP Form 1114. A stock card shall be maintained for each individual hand and power tool, and for all augment and project tools. A NS 1114 will contain assembly number, PN/NSN/NICN, noun name, unit of issue, location, allowance quantity, and high and low limit for SIM items. The reverse of the form should be stamped with the following columns "Date Out," "Date In," "Name/Card No.," "Ser. No.," and "Qty".

(b) NAVSUP Form 1075. This form is optional but recommended for all storeroom items listed in the TOA. It serves as a locator/inventory record and as a backup record of storeroom items.

(c) Kit Inventory List. This list is used for inventory of tool kits. Two copies of Kit Inventory Lists should be maintained for each organic and augment kit on board (e.g., for 25 Kit 19, 50 Kit list should be prepared). The following are required files.

(1) Master Kit Inventory folders. One folder containing the most recent inventory per kit will be maintained by the CTR kit custodian for all organic and augment kits on hand.

(2) Duplicate Kit Inventory Lists. A copy of inventory list shall be provided inside each kit box. This list is maintained by the custodian (CTR or crew leader).

D. **SIGNATURE AUTHORIZATION CARD.** This record identifies those individuals authorized to draw tools from CTR.

E. **CUSTODY FILE (NS 1250).** This file contains the loan-issue NAVSUP 1250. NAVSUP 1250's are filed in alphabetic sequence by individual's name within company/department/unit.

F. **PREVENTIVE MAINTENANCE CARD.** A PM card shall be maintained for each power tool such as electric, pneumatic and gasoline engine driven.

1. Issue and Return Procedures.

(a) Issue. A properly prepared and approved NAVSUP 1250 shall document all issues of tools and tool kits.

(1) The requestor will complete blocks 1, 2, 8, 14, 12, 22, 24, 25, and 30 of the NS 1250.

(2) The countermand will verify the approving signature against the Signature Card File, make the issue, complete blocks 5 and 7 of the NAVSUP 1250, and obtain a legible receipt signature. If augment or project tools are involved, so indicate in the "remarks" block. The yellow copy of the 1250 is given to the requestor and the remaining copies forwarded to the stock battery storekeeper for posting the loan issue to the reverse of the appropriate stock record card. The 1250, minus yellow copy, is then returned to the countermand and placed in the custody files.

(3) For Tool Kit Issues. The requestor will submit a properly prepared and approved 1250 to the CTR kit custodian who will make the issue, file the green copy of the NAVSUP 1250 in the appropriate Master Kit Inventory folder, provide the yellow copy to the requestor and forward the 1250 (less green and yellow copies) to the tool counterman for filing in the custody file.

(b) Return.

(1) The counterman will inspect the returned tool for cleanliness and serviceability, remove the NAVSUP 1250 from the Custody File, and annotate block 29 of the NS 1250 with the date of return. He will then forward the pink copy to the stock battery SK, attach the green copy to the tool, and return the remainder to the requestor. Power tools should be delivered to the PM shop for a safety check prior to returning them to the bin location. The green copy of the NS 1250 may be removed and discarded after the tool is returned to its location (green copy is not necessary if practice is to return item to location immediately). Upon receipt of the pink copy, the record keeper will post the date of return on the reverse of the appropriate NAVSUP 1114, line out the loan issue entry, then discard the pink copy.

(2) For Tool Kit. If the kit is returned with no discrepancies, remove the green copy from the kit folder and return it to the custodian. He will take the green copy to the counterman to obtain the NAVSUP 1250 from the custody file. If shortages exist when the kit is returned, refer to shortages procedure Para 4C. The kit will be accepted by CTR when documentation of the deficiencies is completed. CTR then becomes responsible for filling the kit with the items ordered as they are received.

(c) Lost or Broken Tools. Upon receipt of notification

that a custodian lost or broke a tool, remove the NAVSUP 1250 from the custodian file, annotate block 29 "broken" or "lost" whichever is appropriate, then forward to the record keeper.

A  
survey may be required as prescribed in Chapter 5\*. The  
record  
keeper will post the issue to the front of the NAVSUP 1114 and line out the corresponding line entry on the reverse. Process the NAVSUP 1250 for stock replenishment. Follow the  
procedures  
in paragraph 9\*\*\* for augment/project tools. Forward the  
survey  
to the supply office, if applicable.

(d) Replenishment. PWD tools shall be maintained at 100% of the TOA allowance.

G. PHYSICAL INVENTORY.

1. Schedule and Frequency. The supply officer shall promulgate an inventory schedule to commence with the hospital inventory and thereafter to satisfy the criteria shown below.

A  
written report of inventory completion shall be submitted to  
the  
supply office.

(a) Tool kits will be inventoried biweekly.

(1) Inventory the kits in CTR custody at the time  
of  
issue and return, or as required.

(b) Inventory the CTR shelf items in accordance with SIM/non-SIM procedures and as otherwise required. Weekly spot inventories of 10 card to bin and 10 bin to card SIM items  
will  
be conducted by the CTR supervisor and a report made to the Supply Officer.

2. Tool Kit Inventory Procedures.

(a) Issued Kits. To ensure that tool kits are  
maintained  
in the proper state of readiness, kits issued to users will be inspected and inventoried as prescribed by the cognizant custodian and verified by the Branch Head, Division Chief.  
The

CTR representative will conduct spot inventory of kits in the field. Kit Inventory List will be used for the inventory and properly annotated. Division Chiefs will submit a report of completion to the Supply Officer.

(b) CTR (in-house) kits. In lieu of bi-weekly and monthly inventories of organic and augment tool kits located  
in  
the CTR, tool kits may be secured by boxcar seal (NSN 5340-00-081-3381) immediately after inventory to satisfy the inventory requirement. A CTR "in-house" kit log will be maintained listing tool kit number, boxcar or container serial number, date of the inventory, all shortages with requisition numbers of shortages, and name of the person who conducted the inventory. The tool kit may also be opened to perform  
preventive  
maintenance on power tools. In both instances, a new boxcar  
seal  
will be placed on the tool kit and another entry placed in the

log listing the original inventory date, the date the new  
boxcar  
seal was placed on the tool kit, and the other information as  
listed above. If a tool kit is opened for any other reason,  
an  
inventory must be performed before resealing the tool kit; or  
inventories will be held in accordance with this instruction,  
if  
the tool kit is to be left unsealed.

(c) Tool Kit Shortages. All shortages will be documented on a NAVSUP 1250 prepared as follows:

(1) Crew leader/custodian. Prepare the NAVSUP 1250 for all shortages indicated on the inventory list. A NAVSUP 1250 will not be prepared for shortages previously reported. Shortages reported in previous inventories will be identified by a dash "-" in quantity column. (Note: Quantity column is blank when all allowed items are accounted for.) Retain the yellow copy. Forward the remaining copies with the inventory report.

a When the pink copy of the NAVSUP 1250 is returned from CTR, enter the julian date and serial number of the requisition (block B) under the Dept Nr column of the inventory list and discard the yellow copy.

b When the material is received, line out the quantity short, and requisition number, when appropriate. Discard the pink copy.

(2) CTR Kit Custodian. Upon receipt of the NAVSUP 1250's for shortages from the field custodians:

a Annotate the Master Kit Inventory list and verify all shortages. Investigate excessive shortages and discrepancies. Total the cost of the shortages to determine their dollar value at the end of the inventory list. Provide the information of dollar value "short this period" and "cumulative shortages" to the Supply Officer in writing after each scheduled inventory.

b Process the NAVSUP 1250. Issue the items from stock if available. Forward them to the record keeper for procurement if NIS/NC.

c When the pink copy is received from the supply office enter the julian date and serial number of the requisition (block 8) under Dept Nr column of the Master Kit Inventory List, then forward the copy to the crew leader/custodian.

d When the material is received, line out the quantity short and the requisition number when appropriate, and place the item in the DTO box designated for the particular kit or in the kit box if the kit is in CTR custody. Verify the receipts with those reported by the Division Chief in his memorandum inventory report when it is received.

#### H. PREVENTIVE MAINTENANCE.

1. Schedule and Frequency. The Public Works Officer shall promulgate a monthly PM schedule for power tools checked out.

Use colored tapes to identify the month that the PM was performed. Replace the tool if it is not fit for reissue.

Power tools turned into stock will be safety checked before being returned to their bin location.

2. Power tools will be turned into the PM shop for preventive maintenance with an attached PM Tool Tag Form (COMCBPAC/COMCBLANT 4400/2). The preparation and use of the form are explained below.

(a) This form will be prepared for power tools returned for preventive maintenance by the individual custodian. The information required on the form is self explanatory. He will attach this to the tool and will receive a receipted copy of the form from the PM shop personnel which he will use as a proof of turn-in and to claim the tool after the scheduled PM.

(b) If the tool requires repair and is deadlined due to the lack of part(s), the PM personnel will prepare an Equipment Repair Order (ERO) worksheet (NAVFAC 11200/41B) to document the repair, and he will annotate the following information on the reverse of the PM tool tag:

(1) Date.

(2) Reason for deadline.

(3) ERO number.

(4) Or the remarks "Awaiting Survey" if applicable.

(c) The tag will remain attached to the tool until final disposition (e.g., return to custodian, shelf, or survey).

(d) A Preventive Maintenance Card will be established for each power tool.

(e) Repair of power tools will be documented on Equipment Repair Order (ERO) Worksheet, NAVFAC 11200/41B (SN 1I7610-LL-L25-9490) and made a part of the permanent tool history file.

(f) Maintain a NAVSUP Form 1250 procurement file for repair parts ordered.

(g) At the discretion of the Public Works Officer, tools may be sent to the PWD central shops for maintenance and subsequent return to CTR.

I. **CREW LEADER RESPONSIBILITIES.** Crew leaders shall be held responsible for the tools used by their crews. The appropriate

Division Chief shall authorize each crew leader to draw tools required by his crew. At the discretion of the Public Works Officer, one alternate individual per crew may also be assigned

authority to draw tools. However, the crew leader shall remain responsible for the tools issued for the use of his crew and shall be held completely responsible for the following:

1. Maintaining complete tool kits at all times.

- (a) The crew leader will submit NAVSUP forms 1250, signed by a designated officer, for tools/consumable that are needed to replace consumed, lost, or missing items in kits. Normally, these NS 1250's will be attached to the biweekly inventory sheet. Excessive shortages between inventories must be investigated.

- (b) The crew leader will initiate a survey when required.

2. Assignment of tools within his crew.

3. Proper use and care of assigned tools by his crew.

4. Preservation of tools held in his custody but not in use.

5. Security of assigned tools.

J. **TOOL KIT BOXES.** Each branch will manufacture appropriate replacement boxes for each type tool kit as required. Boxes shall be constructed similar to the sample in Appendix C\*\*\*\*  
of  
COMCBPAC/COMCBLANT INST 1510.1. Outside dimensions should not exceed the standard pack-up boxes. When necessary, two or  
more  
boxes may be used for one kit. Half or quarter-size boxes may  
be  
used. Interior design may vary to meet individual kit requirements. All kit boxes shall be sufficiently  
compartmented  
to prevent damage by loose tools.

TAB C-10

ENVIRONMENTAL ISSUES

- A. **PURPOSE:** To define the environmental concern for  
pollution  
control and abatement.
- B. **DEFINITION:** In general, environmental concerns include:
1. Potable water contamination.
  2. Sewage discharge.
  3. Hazardous waste clean-up.
- C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A
- D. **STEPS:**
1. Specific requirements that might evolve include:
    - (a) Installing spill protection for all above ground  
tanks/containers or oil gasoline and any hazardous substance.  
Provide a written plan signed by PWO and CO which describes  
the  
use of these facilities.
    - (b) Developing a spill contingency plan for oil and  
hazardous materials.
    - (c) Reporting all oil spills that reach the  
environment  
or any reportable release of a hazardous substance IAW  
applicable  
directives.
    - (d) Developing and implementing a hazardous waste  
management plan.
    - (e) Identifying and marking all equipment containing  
polychlorinated biphenyls (PCB/s). Inspect this equipment on  
a  
scheduled basis and dispose of it IAW applicable directives.  
Follow special storage requirements for out-of-use equipment  
awaiting disposal and special regulations on leaking equipment  
and clean up.

(f) Controlling pollutant discharge system for all point source discharges to navigable waters IAW applicable CINC directives.

(g) Monitoring and reporting water quality of CINC supply sources.

(h) Treating boiler water chemically to reduce corrosion or scaling tendencies of the potable water.

(i) Controlling discharges from washracks, oil and water separators.

## TAB C-11

### RECORD KEEPING

A. **PURPOSE:** To establish applicable record keeping logs for maintenance management.

B. **DEFINITION:**

1. Pass Down Log contains special instructions or details to be accomplished during the watch and is maintained by the APWO.

2. Recall Locator Log is used and maintained by the duty section APOOW showing the name/rate/rank of duty personnel on recall status (duty driver, CM, CE, UT) with associated tent and bunk numbers.

3. Work Request Log is maintained by the work control section of maintenance division listing all work requests with date received/completed and alpha-numeric control number.

4. Trouble Call Log lists all emergency work called in showing time/date/dept and caller, brief description of the problem and completion.

5. Watch Log contains a chronological record of events during a particular watch period. This log is maintained by the APOOW.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Log books.
2. Pen, black ink.
3. Straight-edge.

D. **CRITERIA:**

Significant events and urgent tasks are systematically recorded.

E. **STEPS:**

1. Fifteen (15) minutes before watch relief, the POOW picks

up Pass Down Log from APWO, the Trouble Call Log, Recall  
Locator  
Log, and Duty Section Log; receives brief from APWO on ongoing  
operations or other items of interest.

2. Upon completion of duty section muster, personnel assigned recall watch sign in with APOOW in Recall Locator Log.

3. Make appropriate entries in Duty Section Log and/or Trouble Call Log. At a minimum, entries must include:

- (a) Muster report.
- (b) Ongoing operations.
- (c) Security rounds.
- (d) Casualty occurrences and actions taken.
- (e) Generator checks.
- (f) Potable water storage checks.
- (g) Fuel storage checks.

E. **RESPONSIBILITY:**

APWO.

**TAB C-12**

**CLEANING SCHEDULE**

A. **PURPOSE:** To establish housekeeping practices in Public Works Spaces.

B. **DEFINITION:** N/A.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:**

1. Push brooms.
2. Scrub basins/buckets.
3. Wet vacuum.
4. Scrub brushes.
5. Wipes.
6. Detergent, GP.
7. Plastic trash bags.
8. Covered container.

D. **CRITERIA:**

1. Trash, grease, and oily waste will be removed from all work sections daily especially in maintenance/operation areas.
2. Work surfaces will be cleaned daily.
3. Temper tent equipment and shelving will be cleaned weekly.
4. Refrigerator and ice machine will be cleaned weekly.

E. **STEPS:**

1. Commence securing 15 minutes prior to watch relief unless otherwise directed.
  - (a) Clean all greasy, oily, or dirty areas in operations/maintenance spaces.
  - (b) Place trash in a plastic bag/covered container

and  
remove to designated bulk trash location.

(c) Clean all tools and replace in appropriate tool boxes.

(d) Check spaces for fire/safety hazards and correct same.

2. Restock supplies IAW appropriate IOL.

3. Daily cleaning schedule.

(a) Wash decks/wet-vacuum on night watch.

(b) Wipe down work surfaces on night watch.

(c) Police area for trash.

5. Weekly cleaning schedule.

(a) Wipe down racks, storage cabinets, shelving, and desk tops.

(b) Sanitize the refrigerator and ice machine.

E. **RESPONSIBILITY:**

1. Senior PO will assign cleaning details.

2. POOW will ensure all work stations are secured properly.

## TAB C-13

### HAZARDOUS WASTE

A. **PURPOSE:** To provide guidance for the collection, handling and disposal of hospital generated wastes which have contacted living organisms or may otherwise be considered infectious or hazardous.

B. **DEFINITION:**

1. Background: The operation of health care facilities creates waste materials, some of which are hazardous. A subset of hazardous waste is infectious waste; proper handling of infectious waste is mandatory, to prevent spread of infectious diseases. The methods of handling infectious waste, from its generation to its ultimate disposal, must be adhered to strictly by all hands, without exception.

2. Relationship with Host Nations: It is anticipated that the hospital will be operating, in a wartime or conflict mode, on foreign soil. Close liaison with force planners during the pre-deployment planning phase is essential for the hospital command to determine host nation requirements for handling, storage and disposal of infectious hazardous wastes. Whenever possible, agreements and/or contracts with host nations should be secured for the incineration or sanitary burial of wastes in accordance with the host nation's regulations. During peacetime exercises on U.S. soil, adherence to federal, state and local environmental laws and regulations, partially listed in Appendix A, shall be strictly enforced.

3. Categories of Hospital Generated Waste: It must be clearly understood that the field hospital will generate four distinct categories of waste. Each type will require special handling procedures from generation to disposal. These categories are:

(a) Infectious waste - generated in patient contact,

laboratory and surgical areas.

(b) Hazardous waste - usually chemical in nature and generated in the Laboratory, X-ray and Public Works department.

(c) Infectious hazardous waste - generated in the laboratory.

(d) Non-infectious waste - generated in all areas of the hospital.

#### 4. Definitions.

(a) Infectious waste is defined as waste originating from the diagnosis and treatment of people. There are five (5) broad categories of infectious waste recognized by the Centers for Disease Control (CDC): microbiological, blood and blood products, pathological, sharps, and isolation waste. Examples of each of these types include, but are not necessarily limited to, the following:

(1) Microbiological - wastes generated in laboratories processing bacterial, fungal, mycobacterial, or viral materials, such as media-containing plates, tubes, or diagnostic strips; swabs; glass slides; pipettes. Live virus vaccines (including smallpox, yellow fever, rubella, measles, mumps, polio, and adenovirus) and any of the associated equipment for their use also fall into this classification.

(2) Blood and blood products - wastes generated in the collection processing, and use of blood and blood products; tubes for diagnostic blood collection; items and materials contaminated with blood or blood products that are not designed for cleaning, resterilization, and reuse.

(3) Pathological - pathologic specimens, body tissues, contaminated disposable instruments, and laboratory waste generated in the performance of medical treatment procedures and diagnostic laboratory testing.

(4) Sharps - any diagnostic or therapeutic item possessing a surface capable of piercing human skin, not designed for cleaning, resterilization, and reuse. Examples would include needles for injections, preparation of intravenous medicinals, indwelling cannulae, and diagnostic testing (e.g., lumbar puncture, thoracentesis, paracentesis, etc.); scalpels; and other disposable instruments with a surface capable of piercing human skin.

(5) Isolation waste - wastes generated in the therapy

of patients on isolation precautions. Examples would include gowns; gloves; masks; head covers; dressings; disposables basins; paper towels used in isolation rooms; and other such items and materials used in the care of isolation patients that are not designed for cleaning, resterilization, and reuse.

(b) Fomites - an object or item that is not of itself harmful, but may harbor pathogenic microorganisms and serve as a vehicle in the transmission of infections. Examples would include but are not limited to bedding, linen, cloth towels and washrags, diagnostic medical instruments (e.g., stethoscopes, sphygmomanometers, thermometers), and personal items (e.g., razors, toothbrushes, toiletries).

(c) Hazardous waste - any wastes, or combination of wastes, which because of its quantity, concentration, physical or chemical properties may pose a substantial present or potential threat to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

(d) Infectious hazardous waste - any combination of materials and agents that meet the definitions described in 2-4.a. and 2-4.c. above. These wastes will typically be generated in the laboratory when organic pathogens are combined with hazardous chemicals or reagents.

(e) Non-infectious waste - waste generated from non-clinical spaces and waste from patients and their related procedures, where no infection or contagious disease exists.

(f) Storage - the holding of infectious hazardous waste for a temporary period, at the end of which the waste is treated, disposed of, or stored elsewhere.

(g) Treatment - any method, technique, or process designed to change the chemical, physical, or biological characteristics of any infectious hazardous waste so as to render such waste nonhazardous, or less hazardous or safer for transportation, storage or disposal.

(h) Autoclave - an apparatus using steam under

pressure  
for sterilizing medical equipment.

C. **EQUIPMENT, SUPPLIES, AND FORMS REQUIRED:** N/A.

D. **CRITERIA:**

Hazardous waste is properly handled and disposed.

E. **STEPS:**

1. Handling.

(a) Infectious and infectious hazardous waste.

(1) Ward and laboratory personnel shall utilize personal protective clothing and procedures which would normally be practiced in a traditional health care setting for the control of the spread of disease.

(2) Personnel shall wear disposable gloves, gowns, and shoe and hair covers.

(3) Patient contact and laboratory areas will utilize clearly marked, impervious, containers for the disposal of all sharps. When full, the sharps container shall be securely closed with autoclave tape.

(4) Patient areas will utilize clearly marked containers lined with double plastic bags, the outer bag being an orange autoclavable "biological hazard" bag. These containers will be separate from non-infectious "trash" containers. When full, the inner bag will be sealed with autoclave tape. The outer bag will be sealed with filament reinforced tape and autoclave tape.

(b) Hazardous waste.

(1) Protective equipment, as described in DHHS (NIOSH) Publication No. 81-123, will be utilized by personnel handling hazardous waste.

(2) All hazardous waste will be containerized. Ideally, in the original container or containers designed for

the  
collection of such wastes such as those provided with  
automated  
laboratory equipment.

(3) Containerized and transporting to storage  
areas  
will be accomplished by the waste generator (i.e., lab, x-ray,  
public works, etc.).

## 2. Transport and storage.

### (a) Infectious waste.

(1) Ward personnel will deliver properly sealed sharps containers and double bagged infectious waste, to the laboratory temporary holding area, on a regularly scheduled basis. Ideally, this area will be one of low traffic and prohibitive to patient care, smoking, eating, and food or medicinal handling.

(2) Ideally, ward personnel will store and  
transport  
multiple bags of infectious waste in large, covered containers (i.e., "GI" cans with tight fitting lids). These containers shall be scrubbed with a germicidal solution at least once per shift or more often if grossly contaminated.

(3) Laboratory personnel will handle and routinely autoclave waste under steam pressure for a minimum of fifteen (15) minutes. After proper autoclaving, these wastes may be handled as noninfectious depending on host nation requirements.

### (b) Hazardous waste.

(1) As noted in paragraphs 3-1 b.2, hazardous  
waste  
will be stored in their original containers or those designed  
for  
collection of such wastes.

(2) Waste generating personnel will containerize waste according to its chemical grouping such as lubricants, fuels, acids, alkalines, chlorinated hydrocarbons, etc. Containers will be tightly sealed and labeled.

(3) Storage areas will be at least 100 yards from  
the  
hospital compound and actual or potential potable water  
sources.

Ideally, these areas will be elevated with natural drainage away from the hospital and water sources. Waste containers should be protected from the elements and the area clearly marked as "Hazardous Waste Storage."

### 3. Disposal.

(a) General. It must be understood that, in an operational situation, the methods of waste disposal range from ideal to undesirable. The following disposal methods are intended to guide the hospital command towards utilization of the best disposal method for any given situation.

(1) Host Nation Agreement - Under the Status of Forces Agreement the cognizant Commander-in-Chief (CINC) will negotiate with the host country for disposal services.

(2) The cognizant CINC will provide disposal services utilizing established logistical support channels within the theater of operations such as the Supply Battalion of the Force Service Support Group, or supply ships.

(b) Methods. In the absence of the preferred, above mentioned disposal methods, the following may be utilized.

(1) Nonhazardous/noninfectious waste (including properly autoclaved infectious waste).

a Burial in a pit as deep as organic equipment will allow and covered with at least two feet of earth.

Burial pits should be at least 100 yards from the hospital compound and potable water sources.

b Burning by mixing with fuel oil until only ash remains. Ash should then be buried as above. Tactical consideration must be given to open burning as smoke may give away the hospitals location.

(2) Hazardous waste.

a Laboratory chemical waste which contains infectious, organic matter, is to be treated as hazardous as autoclaving of liquids in closed containers is not authorized.

b Burial in sealed, marked containers, as deep as organic equipment will permit. Burial sites should be lined with plastic sheeting, covered with at least four feet of earth and conspicuously marked. Sites should be at least 100 yards from the hospital compound and potable water sources.

F. **RESPONSIBILITY:**

1. The Commanding Officer is responsible for ensuring the proper management of the overall infectious and hazardous waste program and to interface with the host nation to ensure local regulations are satisfied.

2. Nursing Service via the clinical staff is responsible for the handling of all wastes generated in clinical spaces. This includes ensuring that adequate supplies of hampers, bags, tapes, sharps containers, and protective clothing are maintained in these spaces.

3. Laboratory Service is responsible for handling hazardous infectious wastes once it is delivered to or generated by the laboratory. The service is also responsible for proper autoclaving of such wastes to render it free from pathogens.

4. Surgical Service is responsible for handling wastes generated within the operating room giving special attention to surgically removed human tissue.

5. Operating Management is responsible for the removal of waste from the central collection points, including the laboratory, and delivery to the designated pickup area such as the "back loading dock."

6. Public Works Department is responsible for the removal of wastes from the hospital compound and ensuring its proper disposal as outlined in this SOP.

## TAB C-14

### COLD WEATHER PROCEDURES

- A. **PURPOSE:** To detail procedures for cold weather operations.
- B. **DEFINITION:** Cold weather operations occur in environments where temperatures range to minus 10 degrees fahrenheit.
- C. **GENERAL PLAN AND PERSONNEL ITEMS:**
1. Exposure to freezing weather will cause damage to many medicinals and liquids. Prior to mobilization the supply officer should be directed to identify those items susceptible to freezing or cold damage during transit and set up of the hospital. A plan must be developed to protect these items from freeze damage. Collect and store identified items in a temperature controlled area until required.
  2. During construction augment the supply officer with team(s) including an experienced officer and senior petty officer to act as materials locator (expeditor).
  3. Identify and equip warming tents. Assign MAA personnel to keep warming area from becoming congested and to ensure that hot wet items (decaffeinated tea, coffee, soups or hot cool aid) are replenished.
  4. Many temper and other construction tasks cannot be easily done while wearing protective clothing and this increases risks of harmful exposure to cold. Personnel involved in heavy work will have to shed clothing layers. Brief personnel on hazards. Best protection for the hands are leather work gloves with wool inserts. Scheduled work breaks for warming and hot wets should be enforced.
  5. Proper supervision of work crews will be rewarded by efficiency and healthy personnel for later operation of the

hospital. Even with good leaders and personnel work efficiency during cold weather will be degraded by perhaps 25 percent over production in temperate environments.

D. **TEMPER TENT CONSTRUCTION:**

1. Site planning should take into consideration spring thaw runoff, frost heave, snow drifting, drainage inside and around heated tentage, associated problems of mobility, freeze effects on equipment containing water and on patient and personnel.

2. Placement of the tent pegs in frozen ground will be easier if an electric drill and 1 1/2 inch auger is used to drill past the frost line. Water poured into the hole will quickly provide a firm anchor until spring thaw. Tent pegs will quickly pull out in run-off softened ground in spring. Anchor with 2-3 sand bags. Protect tent pegs from snow removal equipment by placing 5-6 ft bamboo poles with red flags attached near outside perimeter of tents to identify the roadway to be plowed.

3. Guy lines should be installed with the tent slips near the eave extender and not the tent peg. This arrangement will make it easier to adjust the tension when snow depth increases and covers the tent peg.

4. Rope handling and bucket lacing will be difficult with gloves provided in FH allowances. Workers must be cautioned about touching metal and exposure to extreme cold.

E. **PLACEMENT OF STATIONARY OUTSIDE EQUIPMENT:**

1. A/C, heating equipment and electrical panels should be placed on blocking material to keep it from freezing to the ground.

2. Ensure that electrical connections are securely fastened, protected and readily locatable (use flags or other devices to identify).

3. Potable and waste water line connectors/fittings must

be  
completely protected by the provided insulated material. Wrap  
with duct or plastic tape because the adhesive tends to not  
stick  
in extreme cold weather.

4. Sewage ejector must be protected from freezing by  
lowering the lower limit or burying the box.

5. Oil fired heaters may be a problem if left outside and  
not used due to snow and water freezing up the blower. In  
addition you should have a designated person to oversee  
repairs  
and become the expert. Special problems include burner  
nozzles  
and blowers.

F. **GENERAL PURPOSE TENT:**

1. GP large tents require much greater maintenance than  
other types. The off set poles and corresponding longer side  
will allow greater accumulations of snow and water melt and  
thus  
increase the pressure on the stakes on the long side. 61% Of  
the  
snow load will gather on the long side. Watches must be  
established to ensure that snow removal operations continue  
through out snow storms. Depths of 3-4 inches of wet snow  
should  
be considered as maximum in unheated tents. Heated tents will  
be  
accumulating the melt water at the same relative rate and will  
require dumping of the water.

2. Use frozen snow banks created by snow removal to  
insulate  
edges of tents. Create run off channels to guard against  
pooling  
of melt water from roofs.

3. Sand bags must be used to anchor tent pegs during  
spring  
thaw. 2-3 Bags will be required for each peg on the long side  
of  
the GPL.

G. **FLOORING:**

1. Walk ways made of pallets or flooring must be provided  
for laundry, food service and other areas that regularly are

wet.  
Suggested methods are double sleepers constructed of 2 by 4s  
with  
staggered joints and covered with sheets of 1/2 inch plywood.  
Support all plywood joints with 2 by 4 blocking.

2. Spring thaws will create pools of water under  
insulated  
flooring. Corrective measures include providing drainage and  
escape passages for the built up snow around the tent eaves.

3. Employ mats at the entrance ways to temper tents for  
scraping soil or water off feet. Helps to prevent tracking  
into  
the wards/wings.

#### H. MAINTENANCE OF TEMPER TENTS:

1. Use provided snow rakes to remove accumulations of  
snow  
on roofs of over 3 inches. If snow continues to accumulate  
round  
the clock removal should be instituted for accumulations of  
over  
2-3 inches.

2. Experience has shown that removal of eve extenders,  
will  
make removal of snow easier. Use bent 12d galvanized nails  
inserted in the holes at the top of the frame eave spindles to  
make sure that the flies stay in place.

3. A maximum height of 5-6 foot of removed snow buildup  
at  
the sides of the tent is best. The remainder should be scooped  
outboard to avoid bulging of the tent sides and to facilitate  
roof snow removal.

4. Doorways along the sides of the temper tent require  
25%  
greater expenditure of effort than a roof section.

5. With wall bulges from snow accumulation beds will have  
to  
be moved as much as 6 inches inboard thereby creating  
passageway  
problems.

6. Removal of old snow banks will require picks and scoop shovels.

7. Snow or ponded water on vestibules must be removed to avoid dripping caused by leakage at seams.

8. Inspect snow rakes for burrs or dents to avoid ripping temper fabric. Burrs can be removed by filing smooth.

9. Vestibules may be more affected by frost heave displacements because they are unheated and will cause the kick plate to raise as much as 4-5 inches and cause alignment problems for bump through doors. Caution must be exercised to avoid injuries.

10. Rips, tears, and damaged grommets may be repaired by sewing several layers of temper material over the tear using the tent repair kit and reinstalling zippers and grommets. Temper material will not stretch as readily in cold weather and caution should be used in matching grommets to eave and roof attachments.

#### I. HEATING AND AIR CONDITIONING:

1. Air conditioning units can supply the required 80 degree outlet air in temperatures of 25-30 degrees. At lower temperatures supplemental oil fired heaters must be employed.

The desired temperature at the bed level is 68 degrees fahrenheit.

2. Modesty curtains may have to be rigged to decrease the drafts at entrances and separate the active portions of the wards from storage or entrances.

3. Connect the oil fired heaters and the air conditioners (AC) to the variable air valve that supplies the tent.

4. Usually the coldest part of the day is just at dawn.

5. Temper wings must have a un-insulated or plain liner installed over (inside) the insulated liners.

6. Recommended modifications to the heating system might

include the following:

(a) Connect a section of un-insulated ducting to the supply duct to deposit the hot air from the OFH to the middle of the wing. Without this extra duct much of the supply air will simply turn and enter the adjacent return duct.

(b) Install the supply plenum along the base of one wall rather than rigged to the overhead.

(c) Some heat escapes from the roof vents and these can be sealed with duct tape. (Recommend caution here: DO NOT TAPE ALL THE VENTS).

7. After camp set up and stabilization locate additional parts for the AC and OFH (e.g. AC bearings, fuel nozzles).

#### I. **UTILITIES:**

1. MSS/Base camp heads will require special care to operate in freezing conditions. All exterior exposed piping and sumps will have to be heated or insulated. The MUM, since it is connected to a temper wing and has better heating and protection will have less or no freeze problems.

2. Check to see if the potable water distribution system holds pressure. You might have to remove the check valve on the discharge side of the pump.

3. Pin hole leaks may develop in the clear two inch hose between the pump discharge and the pressure tank on the potable water system.

4. Keep glass insulation dry. Once saturated it will lose its insulation value.

5. The side covers to the toilets can be removed to expose toilet piping to warm air from the interior.

6. Mount the hot and cold water on the inside of the

shelter  
wall under the sinks to avoid freezing.

7. The under floor water supply in the heads on the opposite side should be replaced to run inside the shelter near the ceiling.

8. If the laundry tent is to be left unheated all components must be thoroughly drained prior to shutting off the heat.

9. The stove tank should be kept full, drawing water from the bottom of the tank. If ice forms it must be chipped and removed.

10. The M-80 heater should be drained completely if not in use and should be supported with wood blocks to prevent freezing to the ground.

11. It must be recognized that any prolonged interruption of power to the water utilities may be more than a minor inconvenience. Destruction of all or part of the system is a reality if left exposed to freezing conditions for long. Draining of water utilities must be accomplished if extended exposure is expected.

H. **RESPONSIBILITY:**

1. Public Works Officer.
2. Department Heads.

**TAB D**  
**STANDARDS AND JOB DESCRIPTIONS**  
**INDEX**

NUMBER	TITLE	PAGE
D-1 69	Public Works Officer	
D-2 70	Assistant Public Works Officer	
D-3 71	Facilities Maintenance Director	
D-4 72	Transportation Division Director	
D-5 73	Fire Marshall	
D-6 74	Administrative Assistant	
D-7 75	Engineering Supervisor	
D-8 76	Facilities Support Supervisor	
D-9 77	Utilities Supervisor	
D-10 78	Transportation Operations Supervisor	
D-11 79	Transportation Maintenance Supervisor	
OTHER STANDARDS		
D-12 80	Key to Functional Area Codes	
D-13 81	Table of Electrical Supply	
D-14	Table of Potable Water Supply	



**TAB D-1**

**JOB DESCRIPTION**

**PUBLIC WORKS OFFICER**

1. Maintains familiarity with FH mission, OPLAN, and command assets.
2. Reviews PW functions and assesses PWO organization.
3. Assigns key personnel in writing, delegating authority, functional responsibilities, accountability, limitations, and collateral duties as applicable.
4. Establishes PW programs and policies.
5. Provides general direction to PW services involved in operations and maintenance of facilities, utility systems, all non-medical equipment, transportation, fire protection, and safety.
6. Implements Command Management Programs/Personnel Programs.
7. Establishes and tracks PW goals and objectives related to energy conservation, pollution control and abatement, fire prevention and control, safety, etc.
8. Coordinates planning and programming requirements for command facilities, utility systems, transportation, and non-medical equipment.
9. Directs all other assigned functions including collateral duties and contingency or emergency operations.

**TAB D-2**

**JOB DESCRIPTION**

**ASSISTANT PUBLIC WORKS OFFICER**

1. Coordinates the daily operations and maintenance of facilities, utility systems, non-medical equipment, transportation, fire protection, and air operations.
2. Assigns personnel to appropriate functions.
3. Ensures that performance of staff/division functions are accomplished promptly, effectively, and are of high quality.
4. Ensures that all management action items and staff work are accomplished correctly and on time. Solves problems and conflicts relating to PW functions.
5. Executes the programs and policies of the PWO and assists in the implementation of the following Command/PWO programs; facilities, engineering, equipment, personnel, and other special programs.
6. Manages the engineering, personnel, maintenance and safety programs IAW applicable directives/instructions.
7. Accomplishes other functions as assigned and assists during all contingency or emergency operations.

**TAB D-3**

**JOB DESCRIPTION**

**FACILITIES MAINTENANCE DIRECTOR**

1. Plans for, directs and coordinates the operations and maintenance of facilities, utility systems, and non-medical equipment.
2. Details division functions to key personnel delegating functional responsibilities, identifying limitations and assigning other duties as applicable.
3. Executes the programs and policies of the PWO and assists in the implementation of the Command material, personnel and special programs.
4. Ensures that performance of division is prompt, effective, and of high quality.
5. Manages the following programs; facilities, safety, energy conservation, pollution control/abatement IAW applicable directive/instructions.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-4**

**JOB DESCRIPTION**

**TRANSPORTATION DIVISION DIRECTOR**

1. Plans for, directs, and coordinates the operations and maintenance of all transportation assets, including construction, material and weight handling equipment.
2. Details division functions to key personnel delegating functional responsibilities, identifying limitations, and assigning other duties as applicable.
3. Executes the programs and policies of the PWO and assists in the implementation of the Command material, personnel and special programs.
4. Ensures that performance of division is prompt, effective, and of high quality.
5. Manages the equipment programs.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-5**

**JOB DESCRIPTION**

**FIRE MARSHALL**

1. Plans for, directs, and coordinates the operations and maintenance of all fire prevention and control facilities and equipment.
2. Ensures that assigned functions are accomplished promptly and effectively.
3. Develops and manages the fire prevention and control program, the foreign object and debris control program, and safety program.
4. Provides frequent and thorough indoctrination and training for all hands in fire prevention and control and safety.
5. Coordinates the efforts of all fire parties.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-6**

**JOB DESCRIPTION**

**ADMINISTRATIVE ASSISTANT**

1. Maintains and updates PW files, directives, instructions, publications, correspondence, and messages.
2. Coordinates and/or assists in administrative matters relating to all functional programs.
3. Manages appointments, meetings/briefings and commitments of PWO and staff.
4. Ensures organization and cleanliness of PW admin tent.
5. Ensures compliance with all schedules.
6. Accomplishes other assigned details.
7. Assists in all contingency of emergency operations.

**TAB D-7**

**JOB DESCRIPTION**

**ENGINEERING SUPERVISOR**

1. Provides surveying/drafting services, planning and estimating, technical advice/recommendations, and other engineering related services.
2. Identifies operation and maintenance problems.
3. Manages work control, scheduling, and timekeeping.  
Maintains  
operational records, data and all other related statistics,  
and  
provides inputs to management reports as directed.
4. Plans for, operates, and maintains the technical library.
5. Inventories and maintains engineering IOLs.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-8**

**JOB DESCRIPTION**

**FACILITIES SUPPORT SUPERVISOR**

1. Plans for, directs and coordinates the operation and maintenance of shop support, QC and inspection, trouble desk, and central tool room IAW applicable instructions.
2. Provides assistance to work centers on scheduled tasks or  
as  
requested.
3. Develops PMI & CI programs/schedules, and conducts inspections.
4. Manages the QC program and trouble desk.
5. Inventories and maintains all facilities support equipment.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-9**

**JOB DESCRIPTION**

**UTILITIES SUPERVISOR**

1. Plans for, directs, and coordinates the operation and maintenance of electrical power generation/distribution, HVAC/refrigeration, water supply/sewer systems.
2. Manages utility systems maintenance.
3. Performs PMs and updates PM schedule.
4. Coordinates and schedules all utility outages.
5. Inventories and maintains utility tools and equipment.
6. Ensures compliance with all schedules.
7. Accomplishes other assigned details.
8. Directs and/or assists in all contingency of emergency operations.

**TAB D-10**

**JOB DESCRIPTION**

**TRANSPORTATION OPERATIONS SUPERVISOR**

1. Plans for, directs, and coordinates transportation operations and maintenance including licensing, dispatching, yard control, fuel storage, water and fuel resupply, refuse collection and disposal.
2. Manages vehicle assignments and utilization.
3. Maintains inventories of equipment, including accessories, and collateral equipage.
4. Supervises receipt and disposal of equipment.
5. Ensures adequate numbers of FH personnel are licensed for each type of vehicle including specialized licenses.
6. Assures registration of all vehicles, construction and material handling equipment, including certification as required.
7. Administers traffic safety and and directs investigations of all accidents.
8. Assures continuous supply of potable water and fuel.
9. Maintains roads.
10. Ensures compliance with all schedules.
11. Accomplishes other assigned details.

**TAB D-11**

**JOB DESCRIPTION**

**TRANSPORTATION MAINTENANCE SUPERVISOR**

1. Plans for, directs and coordinates transportation maintenance, inspection, PM, applicable technical library, and parts/tool room.
2. Manages the maintenance program for all CESE and collateral equipage.
3. Enforces all established maintenance policies.
4. Approves all requisitions for procurements of required material.
5. Maintains the shop workload files.
6. Deadlines equipment as necessary.
7. Controls all CESE transfers and disposals.
8. Supervises the preventive maintenance program.
9. Ensures compliance with all schedules.
10. Accomplishes other assigned details.

**TAB D-12**

**FLEET HOSPITAL FUNCTIONAL AREA CODES**

1. Casualty Receiving* - CR	20. Supply - SU
2. Surgical Suite* - SS	21. Generators - GE
3. Laboratories* - LB	22. Food Service - FS
4. ICU* - IC	23. Public Works Maintenance - PW
5. X-ray* - XR	24. Transportation - TR
6. Wards* - WA	25. Laundry - LN
7. Pharmacy* - PH CH	26. Chaplain Services -
8. OR Prep and Hold* - MD	27. Barber Shop - BS
9. Administration - AD	28. Staff Berthing - SB
10. Specialty Treatment - ST PM	29. Preventive Medicine -
11. Communications - CO	30. Base Camp Hd and Shower - CH
12. Weapons Storage - WE	
13. Support CSR* - CS	
14. Blood Bank* - BB	
15. Medical Repair* - MR	
16. Electric Power Distribution - EP	
17. Potable Water Distribution - PW	
18. Sewage Collection System - SC	
19. Fuel Storage and Distribution - FD	

\* Medical core.

**TAB D-13**

**TABLE OF ELECTRICAL SUPPLY  
DESCENDING ORDER OF REQUIREMENT**

PRIORITY	1	- Medical Core
	1A	- Surgical Suite, OR 1/2/3, CSR 1/2/3, ICU 1/2, Medical Support LAB 1/2 and RA 1/2
Wards	1B	- Specialty Treatment, Casualty Receiving,
	1C	- Preparation and Dental, Pharmacy, CSR Supply
PRIORITY	2	- Administration
	2A	- Communication
	2B	- Medical Equipment Repair
	2C	- Fire Station
PRIORITY	3	- Base Support
	3A	- Messing Facilities, Medical Supply Admin
	3B	- General Supply
	3C	- Laundry 1/2/3, Base Services, etc.
PRIORITY	4	- Maintenance Shops
	4A	- Generator Shop, Electrical/AC Shops
	4B	- Transportation OPS and Maintenance Shops
	4C	- Builder/Steel Shop, PW Admin
PRIORITY	5	- Berthing Tents, etc.
	5A	- Tents, Nos. 101 through 109, Chaplain
	5B	- Tents, Nos. 201 through 409
	5C	- Tents, Nos. 501 through 709

NOTE: Any priority change may be submitted with justification

to  
the Commanding Officer via the PWO.

**TAB D-14**

**TABLE OF POTABLE WATER SUPPLY  
DESCENDING ORDER OF REQUIREMENT**

PRIORITY	1	-	Medical Core
	1A	-	Surgical Suite, OR 1/2/3, CSR 1/2/3, ICU 1/2, Medical Support, Lab 1/2, and RA 1/2
	1B	-	Specialty Treatment, Casualty Receiving, Wards
	1C	-	Preparation and Dental, Pharmacy, CSR Supply
PRIORITY	2	-	Messing and Laundry
	2A	-	Messing Facilities
	2B	-	Laundry 1/2/3/4/5/6
PRIORITY	3	-	Berthing.
	3A	-	Tents, Nos. 101 through 109
	3B	-	Tents, Nos. 201 through 409
	3C	-	Tents, Nos. 501 through 709
PRIORITY	4	-	Base Support
	4A	-	Administration
	4B	-	Fire Station
	4C	-	Supply
	4D	-	Public Works

**TAB E**  
**REFERENCES**  
**INDEX**

NUMBER	FORM	TITLE
H-1	NAVMATINST 11320.14	FIRE PROTECTION
H-2	MIL HDBK 100.8	FIRE PROTECTION FOR FACILITIES ENG. DESIGN AND CONSTRUCTION
H-3	DODINST 4270.1M	FIRE PROTECTION
H-4	NAVSEA S6470-AA-SAF-010	FIRE PROTECTION
H-5	NFPACS	NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS
H-6	IFSTA MANUALS	INTERNATIONAL FIRE SERVICE TRAINING ASSOC. 2ND EDITION "ESSENTIALS OF FIRE FIGHTING"
H-7 SYS.	NFPA #56F	NONFLAMMABLE MEDICAL GAS
H-8	NFPA #58	LIQUEFIED PETROLEUM GASES, STORAGE AND HANDLING
H-9	NFPA #70	NATIONAL ELECTRICAL CODE
H-10 SYSTEMS	NFPA #76A	ESSENTIAL ELECTRICAL  FOR HOSPITALS
H-11	NFPA #76B-T	ELECTRICITY IN HOSPITALS
H-12	NFPA #76CM	HIGH-FREQUENCY ELECTRICAL  EQUIPMENT IN HOSPITALS
H-13	ANSI STANDARD S36-1969	
H-14  EQUIPMENT		UL STANDARD FOR SAFETY, MEDICAL AND DENTAL

H-15      NAVDOCKS P-280

CONSTRUCTION EQUIPMENT AND  
AIRCRAFT SERVICING TIME  
SCHEDULE

NUMBER	FORM	TITLE
—		
H-16	NAVDOCKS P-306	TESTING AND LICENSING OF WEIGHT-HANDLING AND CONSTRUCTION EQUIPMENT OPERATORS
H-17 AND	NAVPAC P-90	PRESERVATION, PACKAGING,  PACKING OF NAVFAC TECH. MATERIAL
H-18 TRANSPORTATION	NAVPAC P-300	MANAGEMENT OF  EQUIPMENT
H-19	NAVPAC P-315	NAVAL CONSTRUCTION FORCE FORCE MANUAL
H-20	NAVPAC P-329	NAVFAC POLICY REFERENCE BOOK
H-21	NAVPAC P-403	NAVY DRIVER'S HANDBOOK
H-22	NAVPAC P-404	NFC EQUIPMENT MANAGEMENT MANUAL WITH SUPPLEMENT
H-23	NAVPAC P-405	SEABEE PLANNER'S & ESTIMATORS HANDBOOK
H-24	OPNAV P-422	JOINT PROCEDURES FOR MANAGEMENT OF ADMINISTRATIVE USE OF VEHICLES
H-25	NAVORD OP-2239	DRIVER'S HANDBOOK, AMMUNITION EXPLOSIVES AND DANGEROUS ARTICLES
H-26	NAVSUP P-284 CH-8	STORAGE AND MATERIALS HANDLING
H-27 MANUAL	NAVSUP P-538	MATERIALS HANDLING EQUIPMENT MAINTENANCE
H-28	NAVFAC P-5100.14	SAFETY AND ACCIDENT INVESTIGATION
H-29	NAVFAC P-5510.7	SUPPLEMENT TO DOD

PROGRAM

H-30      NAVFAC P-11010.20C

INFORMATION SECURITY

REGULATIONS

FACILITIES PROJECTS MANUAL

NUMBER	FORM	TITLE
H-31	COMCBPAC/COMCBLANT	NAVAL CONSTRUCTION FORCE INST 3120.1 TACTICAL EMBARKATION MANUAL, MAY 1978
H-32	COMCBPAC/COMCBLANT	NAVAL CONSTRUCTION FORCE  INST 5100.1E SAFETY MANUAL SEPT 1982
H-33	OPNAVINST 5100.12	NAVAL CONSTRUCTION FORCE  SAFETY MANUAL, JAN 1983
H-34	OPNAVINST 11240.16A	MOTOR VEHICLES MANAGEMENT ACQUISITION AND USE OF (DOD 4500.36R 06JAN78), JUNE 1983
H-35	SPCCINST 10490.3	MATERIALS-HANDLING EQUIPMENT FOR FORCES AFLOAT FLEET ISSUE CONTROL POINTS, NAVAL SHORE ESTABLISHMENT AND LAND- BASED OPERATING FORCES: ADMINISTRATIVE AND CONTROL OF, AUG 1981
H-36	NAVFAC P-306	TESTING AND LICENSING OF CONSTRUCTION EQUIPMENT OPERATORS, SEPT 1978
H-37	NAVFAC P-434	CONSTRUCTION EQUIPMENT DEPARTMENT MANAGEMENT AND OPERATORS MANUAL, APRIL 1982
H-38	NAVSEA OP-2165	NAVY TRANSPORTATION SAFETY HANDBOOK VOL 1, JUNE 1976

**TAB F****FORMS****INDEX**

<u>NUMBER</u>	<u>FORM NUMBER</u>	<u>FORM TITLE</u>	<u>PAGE</u>
I-1		Emergency/Service Work Authorization	
I-2	NAVFAC 11014/20	Work Request	
I-3	NAVFAC 11013/7	Cost Estimate	
I-4	NAVFAC 11014/22	Work Authorization/Estimate	
I-5	NAVFAC 11014/30	Inspector's Report	
I-6		Use Inspection Guide	
I-7		Manpower Availability Summary	
I-8		Shop Load Plan	
I-9		Shop Load Plan	
I-10	DD 599	Patient's Effects Storage Tag	
I-11	NAVMED 6010/8	Patient's Valuables Envelope	

